Paper 7 Entered: August 14, 2017

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

K/S HIMPP, Petitioner,

V.

III HOLDINGS 7, LLC, Patent Owner.

Case IPR2017-00929 Patent 7,929,722 B2

Before SALLY C. MEDLEY, JASON J. CHUNG, and KIMBERLY McGRAW, *Administrative Patent Judges*.

MEDLEY, Administrative Patent Judge.

DECISION
Granting Institution of *Inter Partes* Review 37 C.F.R. § 42.108



I. INTRODUCTION

K/S HIMPP ("Petitioner") filed a Petition for *inter partes* review of claims 1–5, 7, 8, 11, 12, 14–16, and 20–30 of U.S. Patent No. 7,929,722 B2 (Ex. 1001, "the '722 patent"). Paper 3 ("Pet."). III Holdings 7, LLC ("Patent Owner") did not file a Preliminary Response. Institution of an *inter partes* review is authorized by statute when "the information presented in the petition . . . and any response . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition." 35 U.S.C. § 314(a); *see* 37 C.F.R. § 42.108. Upon consideration of the Petition, we conclude the information presented shows there is a reasonable likelihood that Petitioner would prevail in establishing the unpatentability of claims 1–5, 7, 8, 11, 12, 14–16, and 20–30 of the '722 patent.

A. Related Matters

The parties state that there is no matter that would affect, or be affected by, a decision in this proceeding. Pet. 2; Paper 5, 2.

B. The '722 Patent

The '722 patent is directed to a hearing assist device capable of functioning with a coprocessor device. Ex. 1001, 1:11–14. The hearing assist device is capable of stand-alone signal processing in the absence of a coprocessor device. *Id.* at Abstract. Alternatively, the hearing assist device directs processing of a signal to the coprocessor device when the coprocessor is detected, or the coprocessor supplements signal processing performed by the hearing assist device. *Id.* The hearing assist device can be a hearing aid or other component used to distinguish or enhance sound for users with or without hearing impairment. *Id.* at 3:4–15. The '722 patent



describes that hearing assist devices have a small size that limits functionality, and "[t]his form-factor constraint is apparent in short battery life, low powered processors, and weak signal processing algorithms." *Id.* at 1:28–32. The '722 patent is said to improve these shortcomings by using a coprocessor device. *Id.* at 1:44–60.

C. Illustrative Claim

Petitioner challenges claims 1–5, 7, 8, 11, 12, 14–16, and 20–30 of the '722 patent. Claims 1, 8, 20, and 24 are independent claims. Claims 1 and 20, reproduced below, are illustrative of the claimed subject matter:

1. One or more processor-readable storage media containing instructions that, when executed by a processor, perform acts comprising:

detecting a coprocessor device;

comparing a functionality of a hearing assist device to a functionality of the coprocessor device to determine if:

a signal processing functionality absent from the hearing assist device is available on the coprocessor device or a signal processing functionality absent from the coprocessor device is available on the hearing assist device; or

a signal processing functionality present on the hearing assist device is enhanced on the coprocessor device or a signal processing functionality present on the coprocessor device is enhanced on the hearing assist device; and

directing a signal obtained at the hearing assist device for at least partial processing to at least one the hearing assist device or the coprocessor device.

Id. at 12:58–43:61.



20. A hearing assist device comprising:

a sensor configured to detect energy in the form of sound waves;

a converter configured to convert the detected energy into a signal;

a memory configured to store one or more signal processing algorithms;

a processor configured to execute one or more of the signal processing algorithms to process the signal;

a communication interface configured to communicate with a coprocessor device;

a handshaking module configured to receive information regarding a functionality of the coprocessor device via the communication interface;

a functionality comparing module configured to compare the functionality of the coprocessor device to a functionality of the hearing assist device;

a processor switching module configured to direct the signal to at least one of the processor of the hearing assist device or a processor of the coprocessor device; and

a stimulator configured to stimulate an auditory nerve of a user based on the signal as processed by at least one of the processor of the hearing assist device or the processor of the coprocessor device.

Id. at 14:44–67.

D. Asserted Grounds of Unpatentability

Petitioner asserts that claims 1–5, 7, 8, 11, 12, 14–16, and 20–30 are unpatentable based on the following grounds (Pet. 4):



Reference(s)	Basis	Challenged Claim(s)
Moallemi ¹	§ 102	1–3, 7, 8, 11, 12, 14–16, 20–25, 29, and 30
Moallemi	§ 103	4 and 5
Moallemi and Sommer ²	§ 103	26–28

II. DISCUSSION

A. Claim Construction

In an *inter partes* review, we construe claim terms in an unexpired patent according to their broadest reasonable construction in light of the specification of the patent in which they appear. 37 C.F.R. § 42.100(b). Consistent with the broadest reasonable construction, claim terms are presumed to have their ordinary and customary meaning as understood by a person of ordinary skill in the art in the context of the entire patent disclosure. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007).

Petitioner proposes constructions for the following claim terms found in all challenged claims: "hearing assist device," "coprocessor device," "functionality," and "module." Pet. 7–10.

We have reviewed Petitioner's proposed constructions and determine that they are consistent with the broadest reasonable construction. For purposes of this Decision, we adopt the following claim constructions:

² PCT W0 2006/117365, published Nov. 9, 2006 (Ex. 1005) ("Sommer").



¹ U.S. Patent Application Publication No. 2007/0254728 A1, filed Apr. 26, 2007, published Nov. 1, 2007 (Ex. 1004) ("Moallemi").

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